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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,866	02/22/2002	Mark E. Kelly	MSC-23309-1	8743

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EXAMINER	
MENDOZA, MICHAEL G	
ART UNIT	**PAPER NUMBER**
3761	8

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/087,866	KELLY ET AL.
	Examiner	Art Unit
	Michael G. Mendoza	3761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 15 December 2003 have been fully considered but they are not persuasive. The Applicant argues that Cramer et al. fails to teach generating a signal corresponding to the oxygen partial pressure in an air mask. However, Cramer et al. does teach that it is known in the art to monitor and generate a signal corresponding to the oxygen partial pressure in a mask (col. 1, lines 12-19).

2. The Applicant also argues that Cramer et al. fails to teach the step of vibrating a portion of the air mask if the generated signal is determined to be lower than a reference signal. However, Cramer et al. does teach vibrating a portion of the mask if the generated signal is determined to be lower than a reference signal (col. 3, lines 36-38). Buzzers emit sound through vibratory motion, therefore the buzzer of Cramer et al. functions as a vibrating portion.

3. Applicant's arguments with respect to claim 10-12, 14, 15, 20-22, 43-45, 47, 48, and 52-55 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 26-29, 34-38, and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Cramer et al. 4109509.

3. Cramer et al. teaches a method/apparatus for monitoring an oxygen partial pressure in an air mask of an oxygen system, comprising: generating a signal corresponding to the oxygen partial pressure in the air mask, the signal generated independently of the oxygen system; comparing the generated signal with a reference signal corresponding to a desired oxygen partial pressure; and vibrating a portion of the air mask if the generated signal is determined to be lower than the reference signal; detecting the oxygen partial pressure in the air mask; sounding an alarm if the generated signal is determined to be lower than the reference signal; amplifying the generated signal (col. 3, lines 31-41); and selectively shutting off the generated signal (col. 2, lines 25-27).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 9, 13, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer et al.

6. As to claim 9, Cramer et al. discloses the claimed invention except for the signal corresponding to an oxygen partial pressure of about 0.13 or more atmospheres. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a signal corresponding to an oxygen partial pressure of about 0.13 or more atmospheres, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch,* 617 F. 2d 272, 205 USPQ (CCPA 1980).

7. As to claims 13 and 46, Cramer et al. teaches the apparatus as taught above. It should be noted that Cramer et al. fails to specifically teach wherein the power source is a communication system power source. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the power source as recited in the claim because the particular of the power source are a mere design choice. Furthermore, the applicant has not disclosed whey the particulars of the power source are of importance or solve a stated problem or provide an advantage over the prior art.

8. Claims 6, 16, 30, 39, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer et al. in view of Palti 6091974.

9. Cramer et al. teaches a method/apparatus for monitoring an oxygen partial pressure in an air mask of an oxygen system, comprising: generating a signal corresponding to the oxygen partial pressure in the air mask, the signal generated independently of the oxygen system; comparing the generated signal with a reference signal corresponding to a desired oxygen partial pressure; and vibrating a portion of the air mask if the generated signal is determined to be lower than the reference signal; detecting the oxygen partial pressure in the air mask; sounding an alarm if the generated signal is determined to be lower than the reference signal; amplifying the generated signal; and selectively shutting off the generated signal. It should be noted that Cramer et al. fails to specifically teach wherein the generated signal is an electric current, further comprising converting the electric current into a corresponding voltage.

10. Palti teaches that it is know for an electric current to be as a voltage (col. 3, lines 35-38). Therefore it would have been obvious to convert an electric current signal to a voltage for monitoring.

11. Claims 7, 8, 17, 18, 31, 40, 41, 50, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer et al. in view of Doron et al. 6239724.

12. Cramer et al. teaches a method/apparatus for monitoring an oxygen partial pressure in an air mask of an oxygen system, comprising: generating a signal corresponding to the oxygen partial pressure in the air mask, the signal generated independently of the oxygen system; comparing the generated signal with a reference signal corresponding to a desired oxygen partial pressure; and vibrating a portion of the air mask if the generated signal is determined to be lower than the reference signal; detecting the oxygen partial pressure in the air mask; sounding an alarm if the generated signal is determined to be lower than the reference signal; amplifying the generated signal; and selectively shutting off the generated signal. It should be noted that Cramer et al. fails to specifically teach wherein the generated signal is an analog signal, further comprising digitizing the analog signal into a digital signal having a predetermined number of bits.

13. Doron et al. teaches that it is know for an analog signal to be digitized into a digital signal for transferring information (col. 13, lines 24-32). Therefore it would have been obvious to analog to digital format for sending and recording information.

14. As to claims 8, 18, 41, and 51, Cramer/Doron teaches wherein the reference signal is stored in a memory unit, the comparing step comprising comparing the digitized generated signal with stored reference signal (col. 3, lines 31-41, '509).

15. Claims 10-12, 14, 15, 19-22, 32, 43-45, 47, 48, and 52-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer et al. in view of Basham et al. 3675649

16. Cramer et al. teaches a method/apparatus for monitoring an oxygen partial pressure in an air mask of an oxygen system, comprising: a sensor; a comparator; a power source; a vibrator; an alarm; an amplifier; wherein the power source is a battery; a switch selectively capable of disconnecting the power source; wherein the sensor, comparator, and vibrator are integrated into a single unit. It should be noted that Cramer fails to teach a sensor mounted in an air mask.

17. Basham et al. teaches a common mask a common sensor mounted in an air mask for monitoring oxygen partial pressure. Therefore it would have been obvious to one having ordinary skill in the are at the time the invention was made to mount the sensor of Cramer in a mask to for generating signal in accordance with conditions in the mask and to maintain breathable gas conditions in the mask (see abstract).

18. Claims 23 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer et al. in view Basham et al. in further view of Wiesmann et al. 6199550.

19. Cramer/Tripp teach the method/apparatus as taught above. It should be noted that Cramer/Tripp fails teach wherein the air mask is configured to be fitted on a firefighter's helmet.

20. Weismann et al. teaches a common mask configured to be fitted on a firefighter's helmet (see fig. 1). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the mask to fit a firefighter's helmet to monitor the physiologic condition of the firefighter.

21. Claims 24, 25, 33, 56, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer/Basham as applied to claims 10 and 43 above, and further in view of Giorgini 6401714.

22. Cramer/Basham teaches the apparatus according to claims 10 and 43. It should be noted that Cramer/Basham fails to teach wherein the vibrator is attached to a surface of the mask.

23. Giorgini teaches a apparatus with a common vibrator attached to a surface of a mask to warn a user of undesirable conditions. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to place the vibrator on a surface of a mask to warn the user of undesirable conditions even though the user is working in a noisy or other difficult environment (col. 3, lines 2-6).

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael G. Mendoza whose telephone number is (703) 305-3285. The examiner can normally be reached on Mon.-Fri. 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Dawson can be reached on (703) 308-4304. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

MM
March 1, 2004

GLENN K. DAWSON
PRIMARY EXAMINER